

Title (en)
SEMICONDUCTOR MODULE

Title (de)
HALBLEITERMODUL

Title (fr)
MODULE SEMI-CONDUCTEUR

Publication
EP 2224484 A4 20120530 (EN)

Application
EP 08865477 A 20081128

Priority
• JP 2008071605 W 20081128
• JP 2007331353 A 20071225

Abstract (en)
[origin: EP2224484A1] Provided is a semiconductor module (100) wherein a stress relaxing layer (45) is arranged between a ceramic substrate (20) whereupon a semiconductor elements (10) (IGBT (11), diode (12)) are mounted and a cooling device on the rear side of the ceramic substrate (20), and the ceramic substrate, the cooling device and the stress relaxing layer are integrally formed. Furthermore, the stress relaxing layer (45) is separated into a plurality of separated sections (45A, 45B, 45C, 45D) by two slits (461, 462). Furthermore, the slits (461, 462) are positioned between the semiconductor elements when viewed from the thickness direction of the stress relaxing layer (45) and not in a projection region of the semiconductor element.

IPC 8 full level
H01L 23/373 (2006.01); **H01L 25/07** (2006.01)

CPC (source: EP US)
H01L 23/3735 (2013.01 - EP US); **H01L 23/473** (2013.01 - EP US); **H01L 25/072** (2013.01 - EP US); **H01L 24/48** (2013.01 - EP US); **H01L 24/49** (2013.01 - EP US); **H01L 2224/32225** (2013.01 - EP US); **H01L 2224/48137** (2013.01 - EP US); **H01L 2224/49175** (2013.01 - EP US); **H01L 2224/73265** (2013.01 - EP US); **H01L 2924/00014** (2013.01 - EP US); **H01L 2924/01004** (2013.01 - EP US); **H01L 2924/01012** (2013.01 - EP US); **H01L 2924/01078** (2013.01 - EP US); **H01L 2924/1305** (2013.01 - EP US); **H01L 2924/13055** (2013.01 - EP US)

Citation (search report)
• [X] EP 1450401 A1 20040825 - DENKI KAGAKU KOGYO KK [JP]
• [X] DE 102006011995 B3 20071108 - SEMIKRON ELEKTRONIK GMBH [DE]
• See references of WO 2009081689A1

Cited by
JP2020129631A; WO2012171797A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 2224484 A1 20100901; **EP 2224484 A4 20120530**; CN 101897022 A 20101124; CN 101897022 B 20130417; JP 2009158502 A 20090716; JP 4832419 B2 20111207; KR 101097571 B1 20111222; KR 20100085191 A 20100728; US 2010264520 A1 20101021; WO 2009081689 A1 20090702

DOCDB simple family (application)
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